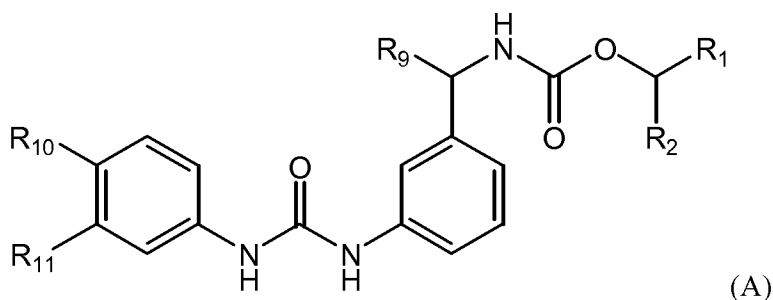


## CLAIMS

Please replace all prior versions and listings of claims with the amended claims as follows:

1. (currently amended) A composition comprising:
  - (a) ~~an apoptosis inducing anti-cancer agent fludarabine;~~
  - (b) a compound of formula (A):



wherein:

~~each of R<sub>1</sub> and R<sub>2</sub> is independently selected from hydrogen, -CF<sub>3</sub>, -(C<sub>4</sub>-C<sub>6</sub>)- straight or branched alkyl; -(C<sub>2</sub>-C<sub>6</sub>)- straight or branched alkenyl or alkynyl; -(C<sub>4</sub>-C<sub>6</sub>)- straight or branched alkyl R<sub>7</sub>; [(C<sub>2</sub>-C<sub>6</sub>)- straight or branched alkenyl or alkynyl]-R<sub>7</sub> or -R<sub>7</sub>; and wherein at least one of R<sub>1</sub> or R<sub>2</sub> is -(C<sub>4</sub>-C<sub>6</sub>)- straight or branched alkyl R<sub>7</sub>; [(C<sub>2</sub>-C<sub>6</sub>)- straight or branched alkenyl or alkynyl]-R<sub>7</sub> or -R<sub>7</sub>~~

one of R<sub>1</sub> or R<sub>2</sub> is selected from hydrogen, ethyl or phenyl; and the other of R<sub>1</sub> or R<sub>2</sub> is selected from -CH<sub>2</sub>OH, -CH<sub>2</sub>CN, -CH<sub>2</sub>CH<sub>2</sub>CN or CH<sub>2</sub>N(CH<sub>2</sub>CH<sub>3</sub>)<sub>2</sub>, or wherein R<sub>1</sub> and R<sub>2</sub> are taken together to form a 3-tetrahydrofuranyl moiety.

~~wherein up to 4 hydrogen atoms in any of said alkyl, alkenyl or alkynyl are optionally and independently replaced by R<sub>3</sub>; and~~

~~wherein one or both of R<sub>1</sub> or R<sub>2</sub> are optionally esterified to form a prodrug;~~

~~or~~

~~wherein R<sub>1</sub> and R<sub>2</sub> are alternatively taken together to form tetrahydrofuranyl, wherein when R<sub>9</sub> is hydrogen, (R)- methyl, (R)- ethyl or (R)- hydroxymethyl, one hydrogen atom in said tetrahydrofuran is replaced by -OR<sub>6</sub> or -R<sub>7</sub>, and wherein when R<sub>9</sub> is (S)- methyl, (S)- ethyl or (S)- hydroxymethyl, one hydrogen atom in~~

said tetrahydrofuran is optionally replaced by  $\text{OR}_6$  or  $\text{R}_7$ ;

wherein when  $\text{R}_9$  is hydrogen, (R) methyl, (R) ethyl or (R) hydroxymethyl and each of  $\text{R}_1$  and  $\text{R}_2$  are independently hydrogen, unsubstituted  $(\text{C}_1\text{--}\text{C}_6)$  straight or branched alkyl, or unsubstituted  $(\text{C}_2\text{--}\text{C}_6)$  straight or branched alkenyl or alkynyl, then the portion of the compound represented by  $\text{CH}(\text{R}_1)\text{R}_2$  is a  $\text{C}_5\text{--}\text{C}_{12}$  straight or branched alkyl, alkenyl or alkynyl;

each  $\text{R}_3$  is independently selected from halo, CN,  $\text{OR}_4$ , or  $\text{N}(\text{R}_5)_2$ ;

$\text{R}_4$  is selected from hydrogen,  $(\text{C}_1\text{--}\text{C}_6)$  straight or branched alkyl,  $(\text{C}_2\text{--}\text{C}_6)$  straight or branched alkenyl or alkynyl,  $[(\text{C}_1\text{--}\text{C}_6)$  straight or branched alkyl]  $\text{R}_7$ ,  $[(\text{C}_2\text{--}\text{C}_6)$  straight or branched alkenyl or alkynyl]  $\text{R}_7$ ,  $\text{C}(\text{O}) [(\text{C}_1\text{--}\text{C}_6)$  straight or branched alkyl],  $\text{C}(\text{O}) [(\text{C}_2\text{--}\text{C}_6)$  straight or branched alkenyl or alkynyl],  $\text{C}(\text{O}) [(\text{C}_1\text{--}\text{C}_6)$  straight or branched alkyl]  $\text{N}(\text{R}_5)_2$ ,  $\text{C}(\text{O}) [(\text{C}_2\text{--}\text{C}_6)$  straight or branched alkenyl or alkynyl]  $\text{N}(\text{R}_5)_2$ ,  $\text{P}(\text{O})(\text{OR}_5)_2$ ,  $\text{P}(\text{O})(\text{OR}_5)(\text{R}_5)$ ,  $\text{C}(\text{O}) \text{R}_7$ ,  $\text{S}(\text{O})_2\text{N}(\text{R}_5)_2$ ,  $[(\text{C}_1\text{--}\text{C}_6)$  straight or branched alkyl] CN, or  $[(\text{C}_2\text{--}\text{C}_6)$  straight or branched alkenyl or alkynyl] CN;

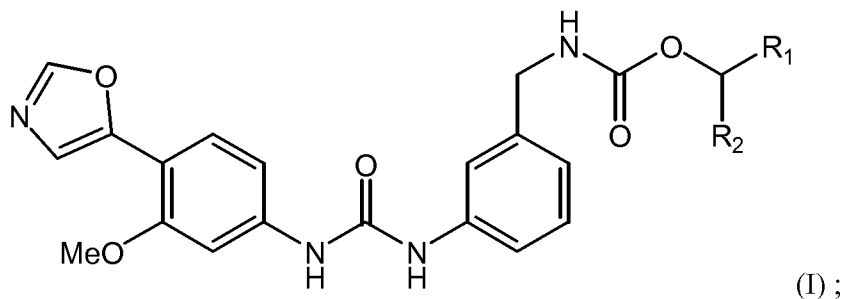
each  $\text{R}_5$  is independently selected from hydrogen,  $(\text{C}_1\text{--}\text{C}_6)$  straight or branched alkyl,  $(\text{C}_2\text{--}\text{C}_6)$  straight or branched alkenyl or alkynyl,  $[(\text{C}_1\text{--}\text{C}_6)$  straight or branched alkyl]  $\text{R}_7$ ,  $[(\text{C}_2\text{--}\text{C}_6)$  straight or branched alkenyl or alkynyl]  $\text{R}_7$ ,  $[(\text{C}_1\text{--}\text{C}_6)$  straight alkyl] CN,  $[(\text{C}_2\text{--}\text{C}_6)$  straight or branched alkenyl or alkynyl] CN,  $[(\text{C}_1\text{--}\text{C}_6)$  straight or branched alkyl]  $\text{OR}_4$ ,  $[(\text{C}_2\text{--}\text{C}_6)$  straight or branched alkenyl or alkynyl]  $\text{OR}_4$ ,  $\text{C}(\text{O}) (\text{C}_1\text{--}\text{C}_6)$  straight or branched alkyl,  $\text{C}(\text{O}) [(\text{C}_2\text{--}\text{C}_6)$  straight or branched alkenyl or alkynyl],  $\text{C}(\text{O}) \text{R}_7$ ,  $\text{C}(\text{O})\text{O} \text{R}_7$ ,  $\text{C}(\text{O})\text{O} (\text{C}_1\text{--}\text{C}_6)$  straight or branched alkyl,  $\text{C}(\text{O})\text{O} [(\text{C}_2\text{--}\text{C}_6)$  straight or branched alkenyl or alkynyl],  $\text{S}(\text{O})_2 (\text{C}_1\text{--}\text{C}_6)$  straight or branched alkyl, or  $\text{S}(\text{O})_2 \text{R}_7$ ; or two  $\text{R}_5$  moieties, when bound to the same nitrogen atom, are taken together with said nitrogen atom to form a 3 to 7 membered heterocyclic ring, wherein said heterocyclic ring optionally contains 1 to 3 additional heteroatoms independently selected from N, O, S,  $\text{S}(\text{O})$  or  $\text{S}(\text{O})_2$ ;

$\text{R}_6$  is selected from  $\text{C}(\text{O}) \text{CH}_2$ ,  $\text{CH}_2 \text{C}(\text{O}) \text{OH}$ ,  $\text{CH}_2 \text{C}(\text{O}) \text{O} \text{tBu}$ ,  $\text{CH}_2 \text{CN}$ , or  $\text{CH}_2 \text{C} \equiv \text{CH}$ ;

each  $\text{R}_7$  is a monocyclic or bicyclic ring system wherein in said ring system:

- ~~\_\_\_\_\_ i. \_\_\_\_\_ each ring comprises 3 to 7 ring atoms independently selected from C, N, O or S;~~
- ~~\_\_\_\_\_ ii. \_\_\_\_\_ no more than 4 ring atoms are selected from N, O or S;~~
- ~~\_\_\_\_\_ iii. \_\_\_\_\_ any CH<sub>2</sub> is optionally replaced with C(O);~~
- ~~\_\_\_\_\_ iv. \_\_\_\_\_ any S is optionally replaced with S(O) or S(O)<sub>2</sub>;~~
- ~~\_\_\_\_\_ each R<sub>8</sub> is independently selected from hydrogen or [C<sub>1</sub>-C<sub>4</sub>] straight or branched alkyl;~~
- ~~\_\_\_\_\_ wherein in any ring system in said compound up to 3 hydrogen atoms bound to the ring atoms are optionally and independently replaced with halo, hydroxy, nitro, cyano, amino, (C<sub>1</sub>-C<sub>4</sub>) straight or branched alkyl, O-(C<sub>1</sub>-C<sub>4</sub>) straight or branched alkyl, (C<sub>2</sub>-C<sub>4</sub>) straight or branched alkenyl or alkynyl, or O-(C<sub>2</sub>-C<sub>4</sub>) straight or branched alkenyl or alkynyl; and~~
- ~~\_\_\_\_\_ wherein any ring system is optionally benzofused;~~
- R<sub>9</sub> is selected from hydrogen, (R)-methyl, (S)-methyl, (R)-ethyl, (S)-ethyl, (R)-hydroxymethyl or (S)-hydroxymethyl;
- R<sub>10</sub> is selected from -C≡N or 5-oxazolyl; and
- R<sub>11</sub> is selected from halo, -O-(C<sub>1</sub>-C<sub>3</sub>) straight alkyl, or -O-(C<sub>2</sub>-C<sub>3</sub>) straight alkenyl or alkynyl; and
- (c) a pharmaceutically acceptable carrier.

2. (original) The composition according to claim 1, wherein said compound has the formula (I):



wherein R<sub>1</sub> and R<sub>2</sub> are as defined in claim 1.

3. (canceled)

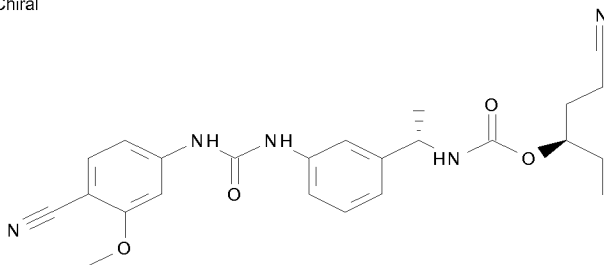
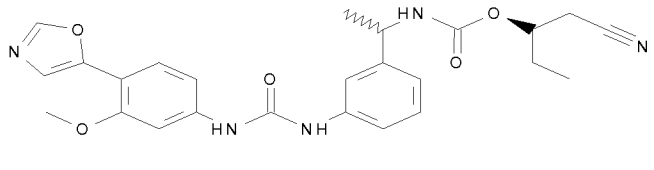
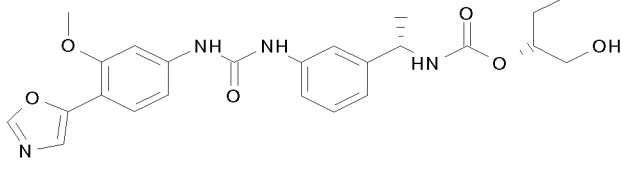
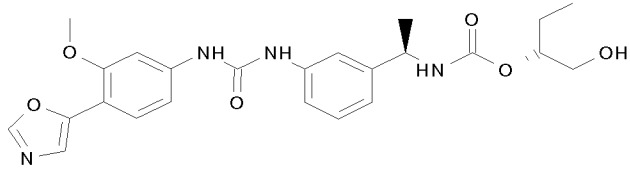
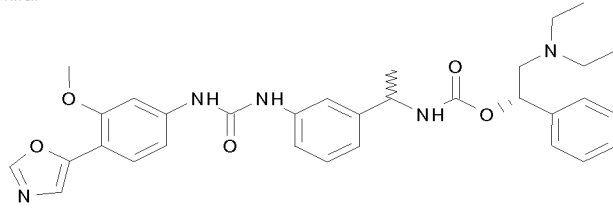
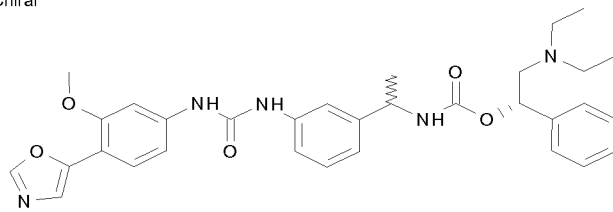
4. (original) The composition according to claim ~~3~~ 1, wherein R<sub>9</sub> is selected from (S)-methyl, (S)-ethyl, or (S)-hydroxymethyl methyl.

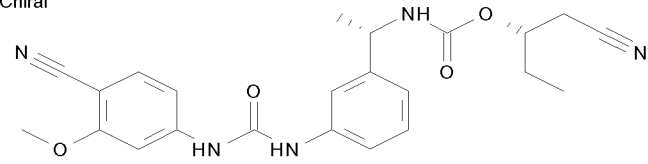
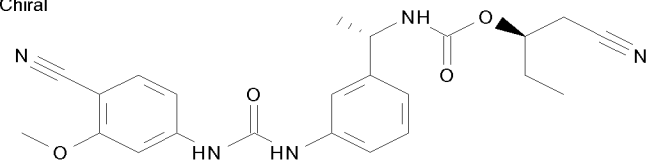
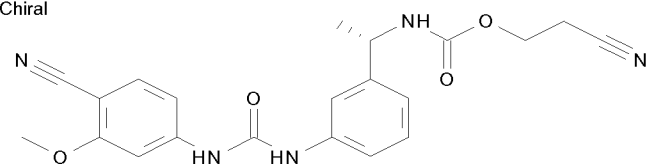
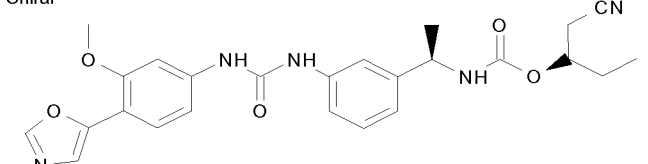
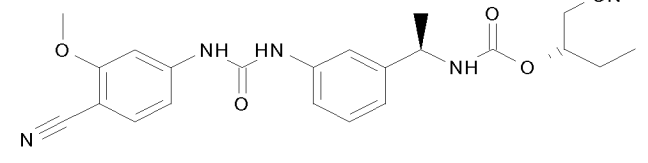
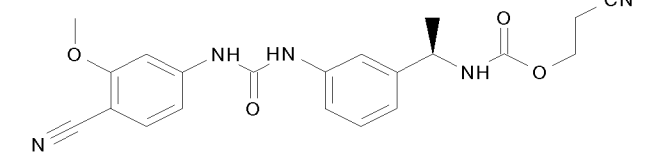
5. (original) The composition according to claim 4, wherein R<sub>9</sub> is (S)-methyl.

6. (currently amended) The composition according to claim ~~3~~ 1, wherein R<sub>11</sub> is selected from O-methyl, O-ethyl or O-isopropyl.

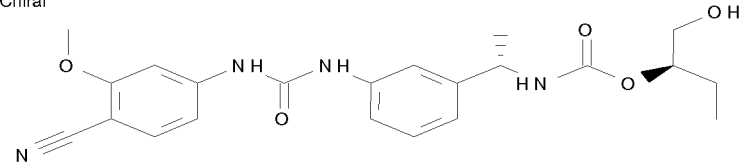
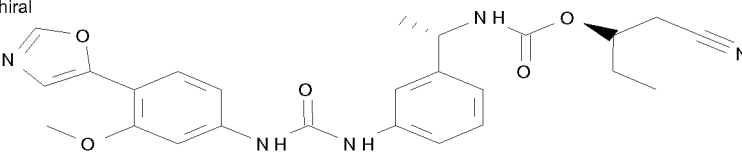
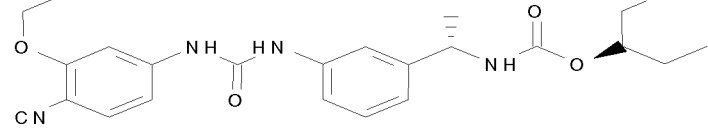
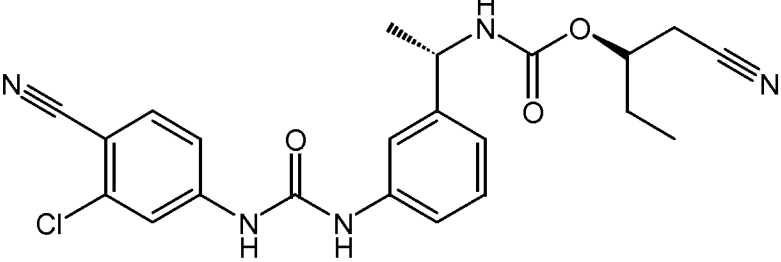
7-9. (canceled)

10. (currently amended) The composition according to claim 1, wherein said compound is selected from: ~~any one of compounds 1 to 187 in Table 1.~~

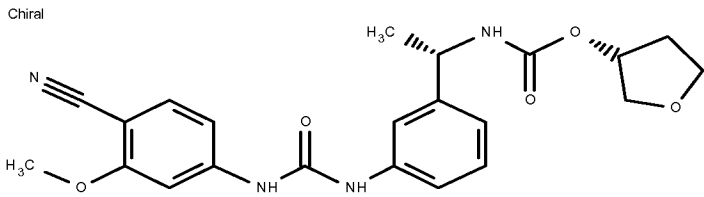
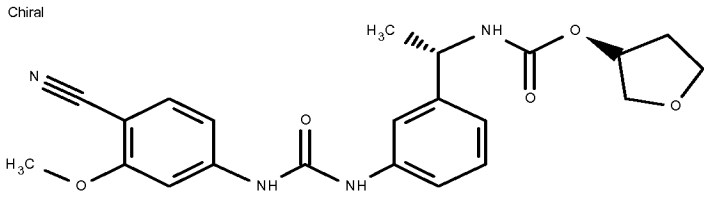
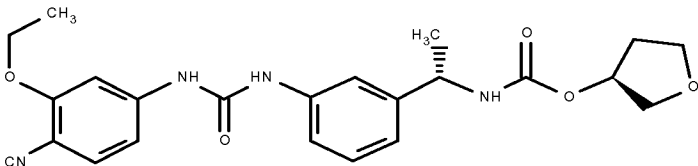
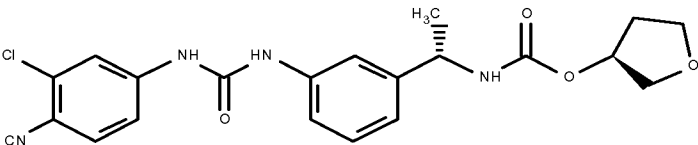
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163	
164	
165	
166	<p>Chiral</p> 
167	<p>Chiral</p> 

168	<p>Chiral</p> 
169	<p>Chiral</p> 
170	<p>Chiral</p> 
171	<p>Chiral</p> 
172	<p>Chiral</p> 
173	<p>Chiral</p> 

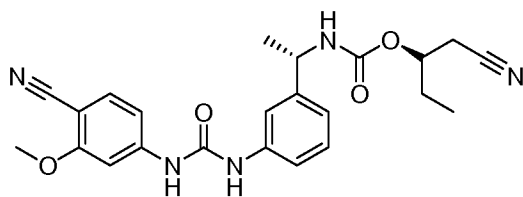
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175	<p>Chiral</p>
176	<p>Chiral</p>
177	
178	
179	<p>Chiral</p>

180	<p>Chiral</p> 
181	<p>Chiral</p> 
182	
183	



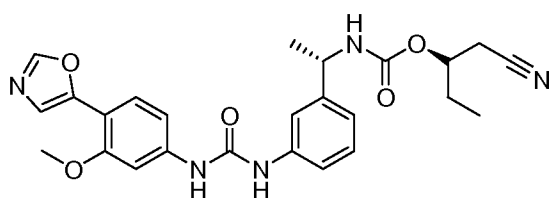
184	<p>Chiral</p> 
185	<p>Chiral</p> 
186	
187	

11. (currently amended) The composition according to claim 10, wherein said compound is selected from:



169

or



181

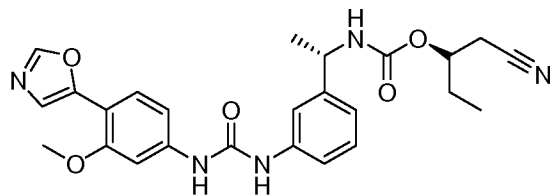
any one of compounds ~~1, 23, 26, 27, 29, 32, 76, 80, 87, 89, 98, 101, 103, 104, 106, 108, 110, 157, 163, 169, 171, 181, 185, 186 or 187~~ in Table 1.

12-19. (canceled)

20. (withdrawn-currently amended) A method for inhibiting tumors and cancer in a mammal comprising the step of administrating to said mammal a composition according to any one of claims ~~1-19~~ 1, 2, 4-6, 10 or 11.

21. (withdrawn) The method according to claim 20, wherein said method is useful to treat or prevent lymphoma, leukemia and related disorders, myelodysplastic syndrome, metastatic melanoma, and other forms of cancer.

22. (new) The composition according to claim 10, wherein said compound is:



181

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23. (new) A method for inhibiting tumors and cancer in a mammal comprising the step of administrating to said mammal a composition according to claim 22.

24. (new) The method according to claim 22, wherein said method is useful to treat or prevent lymphoma, leukemia and related disorders, myelodysplastic syndrome, metastatic melanoma, and other forms of cancer.

25. (new) The method according to claim 23, wherein said other forms of cancer comprise breast cancer, colon cancer, pancreatic cancer, and prostate cancer.